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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/362,995	07/30/1999	FEDERICO CANINI	3572-3	7555

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EXAMINER

VILLECCO, JOHN M

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/362,995

Applicant(s)

CANINI, FEDERICO

Examiner

John M. Villecco

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18 and 19 is/are allowed.
- 6) ☒ Claim(s) 1,2,5,6,8-11,14,15 and 17 is/are rejected.
- 7) ☒ Claim(s) 3,4,6,7,12,13 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's amendment has overcome the rejection set forth in the previous office action mailed on January 5, 2005, thereby obviating the previous standing rejection of claims 1 and 10. Thus, a new grounds of rejection has been presented on the succeeding pages. Additionally, the examiner is presenting new grounds of rejection for claims 5, 6, and 9. This action is non-final due to the new grounds of rejection. The examiner apologizes for this delay in prosecution.

Claim Objections

2. Claims 3 and 6 are objected to because of the following informalities:
- In line 9 of claim 3, applicant recites the phrase "a level of luminosity smaller global threshold level". This appears to be a typographical error and that the applicant meant to use the phrase – a level of luminosity smaller than the global threshold level –.
 - In line 2 of claim 6, applicant recites the phrase "is great than". This appears to be a typographical error and that the applicant meant to use the phrase – is greater than –.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claims 5, 6, 14, and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. **Claims 5 and 14** recite the limitation "ciii) iteratively repeating the previous steps starting from c1)" in line 8. There is insufficient antecedent basis for this limitation in the claim. More specifically, claims 5 and 14 are dependent upon claims 1 and 10, respectively. Each of claims 5 and 14 recites a step c1. However, there is no mention of step c1 in claims 5 and 14. For examination purposes it will be assumed that applicant meant to use step c) instead of step c1.

6. **Claim 6 and 15** are rejected based upon their dependency to claims 5 and 14, respectively.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. **Claims 1, 2, 5, 8-11, 14, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Kondo (U.S. Patent No. 5,585,942).**

9. Regarding **claim 1**, Kondo discloses a method of determining an optimal exposure time using an iterative process. More specifically, Kondo discloses a photometry operation in which the camera is capable of determining if proper exposure has been reached based upon a plurality of integration operations. In column 6, line 8 to column 7, line 55, Kondo discloses the

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photometry operation for determining optimal exposure. In step S10, an integration time is set. The set integration time would inherently be within a set range of values and include M set values. In step S13, Kondo discloses determining if the quantity of light read out from the image pickup element (3) is greater than a predetermined value. If the detected quantity of light is greater than the predetermined value, the system controller changes the integration time of the camera and captures another image. Clearly, if the image is overexposed, then the new integration time would inherently be smaller than the previous integration time. This process is repeated until the image signal falls below the predetermined threshold value. Since this process is repeated, each new integration time will be processed to determine if it falls below the threshold value. Once it is determined that the image signal falls below the threshold value, the exposure is determined to be optimal. The camera is comparing the luminance of the image signal against the threshold value to determine if the image is overexposed (col. 7, lines 53-54).

10. With regard to *claim 2*, as mentioned previously Kondo discloses determining if the luminosity of the image signal is greater than a threshold level. If the level is greater than the threshold level, a new exposure time is generated and the previous steps are repeated until the image sensor reaches its minimum integration time (S14) or the exposure time is one in which the luminosity of the generated image falls below the global threshold level. See column 6, lines 8-65).

11. Regarding *claim 5*, Kondo discloses analyzing a captured image at a time “n” in which the exposure time, T_{n-1} , was set before the image was captured. Furthermore, if an analyzed image does not meet the predetermined threshold, a new exposure time, T_n , is set. The newly

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acquired image would be images at a time, “n+1”. The examiner interprets the analyzing of the first image and the setting of the new exposure time to both occur at a time “n”.

12. As for *claim 8*, Kondo discloses that the image area for photometry can be only every predetermined number of lines since the processing speed of the system is low. See column 14, lines 28-39.

13. Regarding *claim 9*, Kondo discloses a method of determining an optimal exposure time using an iterative process. More specifically, Kondo discloses a photometry operation in which the camera is capable of determining if proper exposure has been reached based upon a plurality of integration operations. In column 6, line 8 to column 7, line 55, Kondo discloses the photometry operation for determining optimal exposure. In step S10, an integration time is set. The set integration time would inherently be within a set range of values and include M set values. In step S13, Kondo discloses determining if the quantity of light read out from the image pickup element (3) is greater than a predetermined value. If the detected quantity of light is greater than the predetermined value, the system controller changes the integration time of the camera and captures another image. Clearly, if the image is overexposed, then the new integration time would inherently be smaller than the previous integration time. This process is repeated until the image signal falls below the predetermined threshold value. Additionally, once it is determined that the image is not overexposed, and additional check is performed to determine if the image is underexposed by comparing the newly captured images signal to another threshold value. Once the image signal meets the second threshold value the image is interpreted to be optimal. In this case, the condition of underexposure is interpreted to be the

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extreme. The camera is comparing the luminance of the image signal against the threshold value to determine if the image is overexposed or underexposed (col. 7, lines 53-54).

14. With regard to **claim 10**, Kondo discloses a method of determining an optimal exposure time using an iterative process. More specifically, Kondo discloses a photometry operation in which the camera is capable of determining if proper exposure has been reached based upon a plurality of integration operations. In column 6, line 8 to column 7, line 55, Kondo discloses the photometry operation for determining optimal exposure. In step S10, an integration time is set. The set integration time would inherently be within a set range of values and include M set values. In step S21, Kondo discloses determining if the quantity of light read out from the image pickup element (3) is less than a predetermined value. If the detected quantity of light is greater than the predetermined value, the system controller changes the integration time of the camera and captures another image (step S26). Clearly, if the image is underexposed, then the new integration time would inherently be larger than the previous integration time. This process is repeated until the image signal falls above the predetermined threshold value. Once the image signal meets the second threshold value, the image is interpreted to be optimal. The camera is comparing the luminance of the image signal against the threshold value to determine if the image is overexposed or underexposed (col. 7, lines 53-54).

15. As for **claim 11**, as mentioned previously Kondo discloses determining if the luminosity of the image signal is greater than a threshold level. If the level is greater than the threshold level, a new exposure time is generated and the previous steps are repeated until the image sensor reaches its maximum integration time (S25) or the exposure time is one in which the

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luminosity of the generated image falls below the global threshold level. See column 6, lines 8-65).

16. Regarding *claim 14*, Kondo discloses analyzing a captured image at a time “n” in which the exposure time, T_{n-1} , was set before the image was captured. Furthermore, if an analyzed image does not meet the predetermined threshold, a new exposure time, T_n , is set. The newly acquired image would be images at a time, “n+1”. The examiner interprets the analyzing of the first image and the setting of the new exposure time to both occur at a time “n”.

17. With regard to *claim 17*, Kondo discloses that the image area for photometry can be only every predetermined number of lines since the processing speed of the system is low. See column 14, lines 28-39.

Allowable Subject Matter

18. Claims 6 and 15 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

19. The following is a statement of reasons for the indication of allowable subject matter:

Regarding *claim 6*, the primary reason for indication of allowable subject matter is that the prior art fails to teach or reasonably suggest that the value of the new exposure time T_n set in step cii) is greater than the value T_{n-1} previously set.

As for *claim 15*, the primary reason for indication of allowable subject matter is that the prior art fails to teach or reasonably suggest that the value of the new exposure time T_n set in step cii) is smaller than the value T_{n-1} previously set.

20. Claims 3, 4, 7, 12, 13, and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 3, the primary reason for indication of allowable subject matter is that the prior art fails to teach or reasonably suggest increasing the exposure time of the sensor and iteratively repeating the steps until the value of the exposure time is the maximum of the range of the values or the image signal is smaller than a threshold level.

As for claim 12, the primary reason for indication of allowable subject matter is that the prior art fails to teach or reasonably suggest decreasing the exposure time of the sensor and iteratively repeating the steps until the value of the exposure time is the minimum of the range of the values or the image signal is greater than a threshold level.

Regarding claims 4 and 13, the primary reason for indication of allowable subject matter is that the prior art fails to teach or reasonably suggest that the step of analyzing includes generating the luminosity of each pixel and determining if each pixel is greater (or smaller) than the global threshold value representative of overexposure (or underexposure), if a positive result is return, accumulating the contribution of the current pixel and iteratively repeating the previous steps, and if a negative result is returned, releasing the current pixel and repeating the steps, and finally, verifying if the sum of the contributions is greater than the global threshold value.

With regard to claims 7 and 16, the primary reason for indication of allowable subject matter is that the prior art fails to teach or reasonably suggest that the method includes defining a

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second range of values within the first range of values that is close to the optimum exposure time previously and found repeating the steps to find a new optimum exposure.

21. Claims 18 and 19 are allowed.

22. The following is an examiner's statement of reasons for allowance:

Regarding *claim 18*, the primary reason for indication of allowable subject matter is that the prior art fails to teach or reasonably suggest that the step of analyzing includes generating the luminosity of each pixel and determining if each pixel is greater than the global threshold value representative of overexposure; if a positive result is return, accumulating the contribution of the current pixel and iteratively repeating the previous steps, and if a negative result is returned, releasing the current pixel and repeating the steps, and finally, verifying if the sum of the contributions is greater than the global threshold value.

As for *claim 19*, the primary reason for indication of allowable subject matter is that the prior art fails to teach or reasonably suggest that the step of analyzing includes generating the luminosity of each pixel and determining if each pixel is smaller than the global threshold value representative of underexposure, if a positive result is return, accumulating the contribution of the current pixel and iteratively repeating the previous steps, and if a negative result is returned, releasing the current pixel and repeating the steps, and finally, verifying if the sum of the contributions is greater than the global threshold value.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

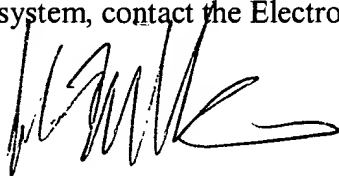
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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

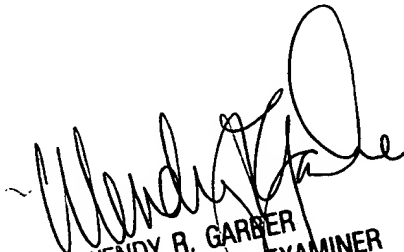
Any inquiry concerning this communication or earlier communications from the examiner should be directed to John M. Villecco whose telephone number is (571) 272-7319. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (571) 272-7308. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John M. Villecco
May 20, 2005



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